Development of Novel Synthetic Methods for Biologically Active Heterocyclic Compounds.

SYNOPSIS SUBMITTED TO THE

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By

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Introduction:

Synthetic chemists continue to explore new methods to carry out chemical transformations. One of these new methods is to run reactions on the Surface of solid. Surfaces of solid have properties that are not duplicated in the solution phase or gas phase.

Hence entirely new chemistry may occur even in the absence of new chemistry, a surface reaction may be more desirable than a solution counterpart, because the reaction can be more convenient to run or a higher yield of the product is attained for these reasons, surface synthetic organic chemistry is rapidly growing fields of study.

Aims and Objectives:

The aim of the proposed research work is to develop novel Synthetic methods by using solid supported such as solvent free Condition, water PEG ionic liquids as a green media Compound with heterocyclic ring system have many pharmacological properties and play an important role in bio-chemical processes.

In the present work, we would like to attempt the synthesis of some heterocyclic biological interests. Their study is of great interest, both from the theoretical and practical stand point. Heterocyclic compound occur widely in nature and in wide variety of non-naturally occurring compounds. A large number of Heterocyclic compound are essential to life for various compound such as alkaloids, antibiotics, essential amino acids, the vitamins , hemoglobin,

the hormones and large number of synthetic drugs and dyes contain heterocyclic ring system. Knowledge of heterocyclic chemistry is useful in biosynthesis and in drugs metabolism as well nucleic acid are important in biological process of heredity and evolution.

There are large numbers of synthetic Heterocyclic compounds with additional important applications and many are valuable intermediate in synthesis. A biological and commercial application of related compounds and often include biological screening data corresponding to newly reported compounds. This strong connection between the preparation of Heterocyclic compounds and their potential benefit to humanity is both welcome and encouraged.

Another aim of our work is to develop anti-hyperpoproteinemie prodrugs (fibrates). Anti-hypertipoproteinemie drug are commonly used to reduce blood cholesterol, triglycerides and lipid content like Non-steroidal Anti-inflammatory Drugs (NSAIDs), Most of the NSAIDs moieties are chemically composed of carboxylic functional group and few anti-hyerpoprotenemie drugs also reported with free carboxylic acid group, which induce gastric ulcers when given by oral route of administration in the proposed research work.

Our objective is to synthesize new oral ester Prodrugs which can be administered by patient himself without the need for trained supervision or assistance. In such a Prodrugs, the carboxylic function of the drug will be temporarily masked to minimize Sevier gastrointestinal side effect with maintaining the efficiency of active pharmaceutical ingredient.

In experimental study we are going to design, synthesis and activity testing of novel heterocyclic Molecules is important and interesting topic of our proposed research work.

We would like to synthesize new type of anti- hyperpoproteinemie ester Prodrugs which may be novel, potent and pharmaceutically acceptable.

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